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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,121	02/22/2002	Jeffrey W. Scott	SILA:095	9531

7590 12/13/2005

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EXAMINER	
TRAN, TUAN A	

ART UNIT	PAPER NUMBER
2682	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/081,121	SCOTT ET AL.	
	Examiner	Art Unit	
	Tuan A. Tran	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 27-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciccarelli et al. (6,175,279) in view of Pangal et al. (6,445,170) and further in view of Burger, Jr. et al. (6,275,090).

Regarding claims 27-28 and 40, Ciccarelli discloses a radio-frequency (RF) apparatus (See fig. 2), comprising a first integrated circuit 1280 configured for providing reference current and voltage including a reference current generator (See figs. 2, 5 and col. 7 lines 38-44). However, Ciccarelli does not mention that the reference current generator comprises such components as claimed. Pangal teaches a reference current generator (See fig. 6) configured to generate a reference output current 620, comprising: a reference voltage source 106 configured to provide a reference voltage; a controllable current source 608, 602 configured to provide the reference output current in response to a first plurality of signals 612, 614; and a first controller 606 configured to provide the first plurality of signals 612, 614, the first plurality of signals being derived from the reference voltage and the reference output current, wherein a noise content of the reference output current is inherently lower than a noise content of the reference voltage (See fig. 6 and col. 6 line 51 to col. 7 line 35). Burger teaches a reference

voltage generator (See fig. 1) configured to generate a reference output voltage, comprising: a controllable voltage source configured to provide the reference output voltage VR in response to a second plurality of signals 115, 116, 117; and a second controller 113 configured to provide the second plurality of signals 115, 116, 117, the second plurality of signals being derived from the reference output voltage VR and a reference voltage VBG, wherein the reference voltage VBG is a low-drift band-gap reference voltage and a noise content of the reference output voltage is inherently lower than a noise content of the reference voltage (See fig. 1 and col. 2 lines 8-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Pangal & Burger in configuring the first integrated circuit as disclosed by Ciccarelli with the reference current generator and the reference voltage generator for the advantage of providing precision constant reference current and voltage to the circuitry.

Regarding claims 29 and 41, Ciccarelli & Pangal & Burger disclose as cited in claims 28 and 40. Pangal further disclose the reference output current is calibrated by calibrating the first plurality of signals (See col. 7 lines 5-15) and Burger further discloses the reference output voltage is calibrated by the second plurality of signals (See fig. 2 and col. 2 line 43 to col. 3 line 3).

Regarding claims 30 and 42, Ciccarelli & Pangal & Burger disclose as cited in claims 29 and 41. Burger further discloses the plurality of signals are configured to be held constant after calibrating (See col. 3 lines 4-7).

Regarding claims 31-32 and 43-44, Ciccarelli & Pangal & Burger disclose as cited in claims 30 and 42. Pangal further discloses the controllable current source 602, 608 comprises a first adjustable resistor 302, 306, 310 wherein the first adjustable resistor 302, 306, 310 inherently comprises a first plurality of switchable resistors configured to adjust a resistance of the first adjustable resistor in response to the first plurality of signals (See fig. 6); and Burger further discloses the controllable voltage source comprises a second adjustable resistor wherein the second adjustable resistor comprises a second plurality of switchable resistors 103-106 configured to adjust a resistance of the second adjustable resistor in response to the second plurality of signals (See fig. 1).

Regarding claims 33 and 45, Ciccarelli & Pangal & Burger disclose as cited in claims 32 and 44. Pangal further discloses the first controller uses successive approximation to generate the first plurality of signals (See col. 7 lines 7-11) and Burger further discloses the second controller uses successive approximation to generate the second plurality of signals (See fig. 2 and col. 2 line 42 to col. 3 line 26).

Regarding claim 34, Ciccarelli & Pangal & Burger disclose as cited in claim 33. Burger further discloses the reference voltage source comprises a band-gap reference (See fig. 1 and col. 2 lines 15-16).

Regarding claim 46, Ciccarelli & Pangal & Burger disclose as cited in claim 45. Burger further discloses the controllable voltage source is further configured to provide the reference output voltage in response to a signal derived from the reference output current (See fig. 1).

Regarding claims 35 and 47, Ciccarelli & Pangal & Burger disclose as cited in claims 34 and 46. Ciccarelli further discloses the first integrated circuit further comprises radio-frequency receiver circuitry (See fig. 2).

Regarding claims 36 and 48, Ciccarelli & Pangal & Burger disclose as cited in claims 35 and 47. Ciccarelli further discloses a second integrated circuit coupled to the first integrated circuit, the second integrated circuit comprising digital signal processing circuitry, the digital signal processing circuitry further configured to accept a digital output of the radio-frequency receiver circuitry (See fig. 2).

Regarding claims 37 and 49, Ciccarelli & Pangal & Burger disclose as cited in claims 36 and 48. Ciccarelli further discloses the reference current and voltage generators supply the reference output current and voltage to the radio-frequency receiver circuitry (See fig. 2 and col. 7 lines 38-42).

Regarding claims 38 and 50, Ciccarelli & Pangal & Burger disclose as cited in claims 37 and 49. The radio-frequency receiver circuitry and the reference current and voltage generators are inherently power up before the reception of a burst by the radio-frequency receiver circuitry in order to properly receive and process incoming data signals.

Regarding claims 39 and 51, Ciccarelli & Pangal & Burger disclose as cited in claims 38 and 50. Burger further discloses the reference output voltage and current are calibrated at power up (See col. 3 lines 14-17).

Response to Arguments

Applicant's arguments filed 09/26/2005 have been fully considered but they are not persuasive.

Upon to the Applicant's request (See Remark), the Examiner would like to present U.S. Patent 3,957,037 issued on May 18, 1976 to Fletcher et al. as concrete evidence to the cited examiner's statement. Fletcher has been admitted that a noise content of output current has been found to lower than a noise content of output voltage (See col. 3 lines 54-57). Since the noise content of the output current is lower then the noise content of the output voltage; therefore, the reference output voltage derived by the reference output current (I_{ref} x $R_{constant}$) has a lower noise content than the output of a voltage source. For that reason, the rejections are proper and stand for all the pending claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Tran whose telephone number is (571)272-7858. The examiner can normally be reached on Mon-Fri, 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272- 7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Tran

LEE NGUYEN
PRIMARY EXAMINER